

REMARKS/ARGUMENTS

Applicants have carefully reviewed the Office Action mailed on December 19, 2006. Applicants respectfully traverse all objections, rejections, and assertions made by the Examiner. Claims 1-56 remain pending, of which claims 1-40 have been withdrawn from consideration. Claims 41-56 have been rejected. Claims 41, 48, 53 and 54 have been amended with this response.

Claim Amendments

Claims 41, 48, 53 and 54 have been amended with this response. Support for these amendments can be found, for example, in paragraph [0037] of the application.

Claims Rejections under 35 U.S.C. § 102

Claims 41-53 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Parisi et al., U.S. Publication No. 2001/0027310 (hereinafter “Parisi”) in view of either Willard, U.S. Patent No. 6,669,886 or Cohen, U.S. Patent No. 5,330,521. Applicants respectfully traverse this rejection. In order for a combination of references to render a claim obvious, there must be some suggestion or motivation in the prior art to make the proposed combination and each and every element of the claim must be present in the cited prior art. See M.P.E.P. §2143.01 and §2143.03.

Amended claim 41 recites, in part, a medical device including a reinforcing member, the medical device formed by a process that includes the step of treating at least a portion of the metallic surface of one or more metallic filaments to provide a final surface area that is greater than the initial surface area. Amended claim 48 recites, among other elements, a reinforcing member including a metallic filament that includes a metallic surface that includes a portion that has been treated to provide an increased surface area relative to a surface area of the portion prior to treatment, and one or more polymer structures connected to the treated portion of the surface of the metallic filament. Amended claim 53 recites, in part, a catheter with a tubular body comprising a metallic reinforcing member including a metallic surface, wherein at least a portion of the surface has been treated to provide an increased surface area

relative to a surface areas of the portion prior to treatment and a member made of polymer material, the member being connected to the surface.

In contrast, Parisi discloses a guide catheter with a lubricious liner. As shown in Figure 2 of Parisi, the catheter shaft has an inner tubular member 12, a support member 14 and an outer tubular member 16. As mentioned in paragraph [0037], the catheter can be modified by removing portions of the outer tubular member 16 where the modifications are desired. One method that is disclosed for removing portions of the outer tubular member 16 is disclosed in paragraph [0040]. In this paragraph, it is stated that “once filament 30 is encountered, the laser does not have sufficient contact time or energy to affect the support member material” (emphasis added). In fact, “in practice”, “it is recognized that a thin coating of polymer will remain on the support [m]ember filaments due to cohesion of the polymer to the wire.” (See the last sentence of paragraph [0040].)

As such, it cannot be said that a metallic surface in Parisi has been treated to change the surface area, as required by independent claims 41, 48 and 53. For at least this reason, Parisi is missing a) a final surface area on a portion the metallic surface that is greater than the initial surface area of the metallic (claim 41), b) a portion of a metallic surface that has been treated and that has one or more polymer structures connected to the treated portion (claim 48) and c) a portion of a metallic surface that has been treated, and a polymer member connected to the treated surface (claim 53).

In addition, neither Willard nor Cohen disclose the portions of claims 41, 48 and 53 that are missing from Parisi. In Willard, a reinforced catheter and method of manufacturing such a catheter is disclosed. In Figures 5 and 6 of Willard, one process for forming a catheter shaft is discussed. In this example, a reinforcing member has strands, and each strand has a core wire 64 which is coated with a non-thermoplastic polymer 66. See column 5, lines 15-20. As shown in Figure 6, in order to shape the non-thermoplastic polymer that coats the core wires, a heated die 60 is provided around at least a portion of the outer surface of the reinforcing member 62. See column 5, lines 27-30. After applying heat and pressure with the die 60, the result is a thin walled ~~reinforced~~ non-thermoplastic tube around the mandrel 68, as shown in Figure 6. See column 5, lines 30-37.

The disclosure then goes on to state that “it may be desirable to etch the outer surface of the reinforcing member 62.” See column 5, lines 40-41. Again, as mentioned above, the reinforcing member 62 has strands that have a core wire 64, and the polymer coating is over the core wire 64. As such, etching the reinforcing member 62 would actually be etching the polymeric surface of the reinforcing member 62. For at least this reason, Applicants respectfully assert that Willard does not disclose the elements of claims 41, 48 and 53 that are missing from Parisi. Specifically, Willard is missing at least a) a final surface area on a portion the metallic surface that is greater than the initial surface area of the metallic (claim 41), b) a portion of a metallic surface that has been treated and that has one or more polymer structures connected to the treated portion (claim 48) and c) a portion of a metallic surface that has been treated, and a polymer member connected to the treated surface (claim 53).

As such, the combination of Parisi and Willard does not disclose each and every element of claims 41, 48 and 53. For at least this reason, Applicants assert that these claims are allowable over these references. Because they are dependent on claims 41, 48 and 53 and because they contain additional patentably distinct elements, Applicants also assert that claims 42-47 and 49-52 are allowable over these references.

Further, Applicants also point out that Cohen does not disclose the elements of claims 41, 48 and 53 that are missing from Parisi. Cohen discloses a low resistance electrical lead. As discussed in column 3, lines 15-32 of Cohen, the lead comprises a wire core formed into a helical coil having pre-compression. A layer of electrically conductive material is formed around the wire core such that there is electrical continuity between the wire core and the electrically conductive layer. Further, a biocompatible, electrically insulating sheath covers the helical coil. This configuration is shown in Figure 3, where the wire core is designated 22, the electrically conductive material formed around the wire core is designated 24 and the sheath is designated 24. At column 6, lines 52-65, Cohen discloses that the wire core 22 can be etched with an acid in order to remove any oxides or other films that may be present on the wire core 22 before forming the conductive electrically conductive layer 24 on the wire core 22.

As such, Cohen does not describe a final metallic surface area of a metallic filament, as required by claim 41 (the final metallic surface area of the wire core 22 is actually formed

by the electrically conductive layer 24, not the etched surface of the wire core 22). In addition, the etched surface of the wire core 22 on Cohen is not disclosed as being connected to one or more polymer structures, as recited in claim 48, or a polymer member, as recited in claim 53 (the electrically conductive layer 24 is disposed over the wire core 22). As such, the combination of Parisi and Cohen does not disclose each and every element of claims 41, 48 and 53. For at least this reason, Applicants assert that these claims are allowable over these references. Because they are dependent on claims 41, 48 and 53 and because they contain additional patentably distinct elements, Applicants also assert that claims 42-47 and 49-52 are allowable over these references.

In addition, Applicants also assert that there is no motivation or suggestion to combine Parisi and Cohen as proposed in the Office Action. Parisi discloses a guide catheter with a lubricious inner liner. Nothing in Parisi mentions a need for the catheter of Parisi to be able to conduct electricity along the length of the catheter shaft. Cohen discloses a low resistance implantable electrical lead. From the Office Action, it is apparent that the Examiner is proposing to modify the structure of Parisi with the electrical lead disclosed in Cohen. However, neither Parisi nor Cohen have a suggestion or motivation to place an electrically conductive lead in a guide catheter. As such, there is no motivation or suggestion in the cited prior art to combine Parisi and Cohen as proposed in the Office Action. For at least this additional reason, this combination of references cannot be used to render the claims of this application obvious, and Applicants assert that all pending claims are allowable over these references.

Claims 54-56 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Parisi in view of either Willard or Cohen, and further in view of Ozasa, U.S. Publication No. 2002/0143384. Applicants respectfully traverse this rejection. In order for a combination of references to render a claim obvious, there must be some suggestion or motivation in the prior art to make the proposed combination and each and every element of the claim must be present in the cited prior art. See M.P.E.P. §2143.01 and §2143.03.

Claim 54 recites, in part, a metallic surface that is chemically etched to provide a roughened surface and a polymer member connected to the roughened surface, as required by claim 54. Applicants respectfully assert that none of Parisi, Willard or Cohen disclose such a

metallic surface with a polymer member connected to it. As mentioned above, Parisi does not treat the surface of the filament 30, and does not therefore disclose a roughened surface as recited in claim 54. In addition, Willard does not disclose any type of treatment of a metallic surface at all, much less a metallic surface chemically etched to provide a roughened surface as recited in claim 54. With respect to Cohen, this reference has an electrically conductive material formed over the surface of the wire core, and does not disclose a roughened surface connected to a polymer member as recited in claim 54. Applicants also assert that Ozasa does not disclose the elements of claim 54 that are missing from the Parisi/Willard and Parisi/Cohen combinations.

As mentioned in the last sentence of paragraph [0050] of Ozasa, the mesh-like structure of Figure 1 can be produced by cutting a pipe section. Desired portions of the pipe section can be removed by machining, chemical etching, laser or the like to form a plurality of cutout parts. In other words, the machining, chemical etching, laser or other like processes mentioned in this portion of Ozasa does not change a metallic surface area in the manner mentioned in the current claims; rather, the machining, chemical etching, laser or other processes actually totally remove portions of the pipe section. Because of this, it cannot be said that Ozasa discloses a metallic surface that is chemically etched to provide a roughened surface and a polymer member connected to the roughened surface, as required by claim 54.

For at least this reason, Applicants assert that neither the Parisi/Willard/Ozasa nor Parisi/Cohen/Ozasa combinations disclose all elements of claim 54, and as such this claim is allowable over these references. Because they depend from claim 54 and because they contain additional patentably distinct elements, Applicants also assert that claims 55 and 56 are allowable over these references.

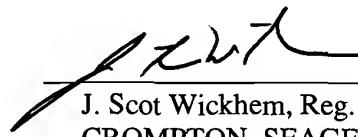
Conclusion

Reexamination and reconsideration are requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is also respectfully requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,
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By his attorney,

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